

Virtuosi of Sound and Light: Wordsworth and William Rowan Hamilton*

CHRISTOPHER E. J. SIMONS

Introduction

Among the many new friendships that Wordsworth cultivated in his middle age, one of the most remarkable was with the mathematician, astronomer, and poet William Rowan Hamilton (1805–1865). Wordsworth first met Hamilton in the Lakes in 1827. Wordsworth was 57 years old, now an established figure in British poetry. Hamilton, born just a few months after Wordsworth completed the thirteen-book *Prelude*, was a young man of 22, but already an established figure in mathematics. In June 1827, just a few months before he met Wordsworth, he had been appointed Andrews professor of astronomy, ‘which entailed his appointment as astronomer royal of Ireland and director of the Dunsink observatory, 5 miles from Dublin’ (Lewis). Hamilton had earned this appointment on the strength of his research in ‘geometrical optics’, conducted while he was still an undergraduate at Trinity College.

Recent scholarship has investigated the Wordsworth-Hamilton relationship. Thomas Owens has carefully demonstrated how Hamilton’s friendship regenerated Wordsworth’s interest in mathematics. Revisions to *The Prelude* in 1827 and 1838–9 show Wordsworth’s new awareness of post-Newtonian science (Owens). Mathematics, represented as a part of Wordsworth’s past in Book 6 of the 1805 *Prelude*, becomes, in revision, an active field of study again. In 1805 Wordsworth wrote, of his study of Euclid and Newton, that he ‘had stepped | In these inquiries but a little way, |

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No farther than the threshold' (vi. 137–9). In 1838–9 he revised this to the more active, 'Though advanced | In these inquiries... | No farther than the threshold' (vi. 117–8) and added lines describing his meditations regarding how geometrical abstractions relate to 'Nature's laws', and how they serve 'the mind of earth-born man; | From star to star, from kindred sphere to sphere, | From system on to system without end' (vi. 124, 126–8) (Abrams, Wordsworth, and Gill 192–3). Owens sees Hamilton's influence in these revisions:

Wordsworth's 'struggles' with mathematics in the 1830s were surely caused by his recent knowledge of new Hamiltonian theories of light, dynamics, and algebra, and not by the Euclid that he had memorised so perfectly at school and that he was surpassing. (Owens 168)

Daniel Brown compares Wordsworth and Hamilton's attitudes towards observation of the natural world *versus* abstract thought, and how these attitudes affected both men's poetry and Hamilton's scientific research (Brown). Brown notes that Hamilton prefers Coleridge's more fantastical and abstract style for its 'truth of feeling' (Graves i. 345). These poetic tastes coincide with his scientific preference for abstract reasoning over direct observation: 'My tastes... are decidedly mathematical rather than physical, and I dislike observing; which circumstances make me *rather* unfit for holding an Observatory' (Graves i. 431). Wordsworth, in this sense, is ironically the more 'scientific' of the two men, in terms of his observation of the world around him, and his insistence that 'the logical faculty has infinitely more to do with poetry than the young and inexperienced... ever dreams of.'

This paper will give further examples of how these two friends influenced each other's work. Its main objective is to demonstrate the influence of Hamilton on several of Wordsworth's *new* poems written after 1827. Hamilton's quoting of Wordsworth's philosophical poetry, during his lectures in astronomy and mathematics, is well documented by Graves. Similarly, primary evidence from correspondence supports the contention

that Hamilton's metaphysics—so strongly influenced by Coleridge—slightly altered Wordsworth's conception of the imagination in his later years. Yet the most surprising influence of Hamilton on Wordsworth remains unreported: not only Hamilton's science, but his own voluminous, amateur verses, lingering in Wordsworth's mind as he composed new poems after 1827. Wordsworth read Hamilton's work conscientiously. His careful responses to Hamilton's requests for criticism meant that the young astronomer's verses, and the more unfortunate circumstances of his personal life, worked their way into Wordsworth's own texts.

Wordsworth's role in his friendship with Hamilton was primarily as a poetic mentor and critic. On the other side, Hamilton seems to have inspired Wordsworth: as a poetic disciple, but also as a keen proponent of the fundamental importance of the imagination—albeit with key differences. The paper gives some key examples of these reciprocal influences; it concludes that possibly the strongest references to Hamilton in Wordsworth's texts derive more from the influence of human rather than abstract mathematical and metaphysical principles. They derive from Wordsworth's position as a conscientious and concerned mentor to Hamilton's poetry and romantic passions.

First Meeting

Hamilton was an avid reader of Wordsworth's poetry, and Coleridge's. He met Wordsworth during a two-month tour through Ireland and the British Isles with the public engineer Alexander Nimmo (O'Donnell 69). Hamilton was full of boundless energy and scientific enthusiasm. Memorable experiences during his tour included a descent in a diving bell at Limerick, and almost getting lost while exploring 'caverns measureless to man' at Dudley. In the Lakes, he climbed Helvellyn; his account of this experience shares remarkable similarities to Wordsworth's account of Snowdon in Book 13 of the *Prelude* (Graves i. 262–3).

The evening of Hamilton's Helvellyn ascent, after drying his wet stockings, he had tea with Wordsworth. Accounts of their first meeting in Ambleside have the legendary qualities of Wordsworth and Coleridge's

annus mirabilis at Alfoxden in 1797–8. The two men took to each other immediately. Their conversation engrossed them to the degree that it held them, like wandering spirits, in a magical perambulation—a walking circuit between Rydal Mount and Hamilton’s hotel in Ambleside. Hamilton described the experience to his sister Eliza:

September 16, 1827: He (Wordsworth) walked back with our party as far as their lodge; and then... I offered to walk back with him, while my party proceeded to the hotel. This offer he accepted, and our conversation had become so interesting that when we arrived at his house, a distance of about a mile, he proposed to walk back with me on my way to Ambleside, a proposal which you may be sure that I did not reject; so far from it that when he came to turn once more towards his home, I also turned once more along with him. It was very late when I reached the hotel after all this walking; and in returning I had some odd adventures which perhaps we may talk of another time; for instance... I was near wandering first into a mill-pond, and secondly into a churchyard. (Graves i. 264)¹⁾

Subjects discussed probably included poetry; ancient history and languages; Hamilton’s recently published work on light rays; and metaphysics. While talking of poetry, they may also have talked about love; any reticence on the elderly Wordsworth’s part to engage the younger man on this subject would have been made up for by Hamilton’s well-documented enthusiasm for discussing his unrequited, lifelong love for a young woman named Catherine Disney.

Hamilton’s effect on Wordsworth should not be understated; Wordsworth’s first letter to Hamilton dates to 24 September 1827: a remarkably quick reply

1) Whatever range of subjects the two men discussed during the four times they walked between Rydal and Ambleside were enough to stimulate a lifelong friendship; Hamilton notes that they walked together for ‘a long, long time, *without any companion* except the stars and our own burning thoughts and words’ (Graves i. 262).

by Wordsworth's standards—a man who wrote of himself, in a later letter to Hamilton, as 'I have ever been a poor Epistolarian' (De Selincourt and Hill ii. 322). The letter concludes:

Seldom have I parted—never, I was going to say—with one whom, after so short an acquaintance, I lost sight of with more regret. I trust we shall meet again. (De Selincourt and Hill i. 545–7)

As Hamilton's first biographer R. P. Graves astutely observes:

those who knew Wordsworth will be able to estimate how high is the value of the tribute to Hamilton conveyed in one line.... He has said in my hearing that Coleridge and Hamilton were the two most wonderful men, taking all their endowments together, that he had ever met. (Graves i. 269)

Wordsworth's aside ('never, I was going to say') speaks a volume about his long friendship with Coleridge, and the pleasure of its restoration. Although the breach in 1812 had changed both men, Wordsworth and Coleridge were back to their old larks in 1828, running off on a whirlwind tour of the Rhine with Dora. One cannot help wondering if Wordsworth's meeting with Hamilton played some small part in reminding the poet of earlier inspirational days. As a later biographer notes:

The similarity of Hamilton's character to that of Coleridge was remarked upon at the time, both by William Wordsworth and by [Mary]. Wordsworth said that Hamilton reminded him more of Coleridge than any other man he ever met. Hamilton considered himself a disciple of Coleridge and tended to express himself in Coleridgean language... on the subject of metaphysics, which probably made the similarity seem greater than it actually was.

(Hankins, *Sir William Rowan Hamilton* 253)

Sadly, the similarities between Hamilton and Coleridge would grow deeper. Both men were student prodigies, and carried a darkness that weighed on their creative energies. Hamilton suffered from an unhappy marriage after 1833, which, along with overwork, led him to problems with alcohol abuse in the 1840s. More like Wordsworth than Coleridge, Hamilton depended for love and support on his four unmarried sisters, with whom he lived throughout their lives.

But in the heady days of autumn 1827, Hamilton began sending his poetry to Wordsworth, and Wordsworth replied with warm praise and incisive criticism. Wordsworth returned the visit to Hamilton at the Dunsink Observatory in August 1829, during his first and only tour of Ireland. Hamilton visited Wordsworth in the Lakes twice more: in July 1830, with his poetess sister Eliza; and again, in July 1844.

Wordsworth on Hamilton's Heart

Wordsworth was not only a kindred philosophical spirit to Hamilton and a poetic mentor; he also gave Hamilton advice on his difficult personal relationships.² Wordsworth met Coleridge too late to have any influence on his over-hasty marriage, but with Hamilton, perhaps he felt that he had the chance to prevent history repeating itself. The strains of Wordsworth's own early relationships may also have encouraged his spirit of patronage to overcome his reticence about discussing private matters. Unfortunately, his good advice proved fruitless.

Hamilton visited Catherine Disney, the love of his life, at Armagh in 1830; she was married, with children—but unhappy. Disney returned the visit, coming to see Hamilton at his observatory, but Hamilton's rectitude prevented him from changing both their destinies; she was receptive, but

2) Wordsworth 'felt it his duty to steer Hamilton gently away from poetry—a field in which his efforts might best be described as competent, if undistinguished. This would allow more time for science where he was obviously outstandingly capable. The older man also tried to advise his young friend on romantic matters, a field wherein he was not without suitably relevant experience himself' (O'Donnell 71).

all he did was break his own telescope in front of her (O'Donnell 85–7).

This experience sent Hamilton spiralling into depression; it seems that his second visit to Wordsworth at Rydal, in July 1830, helped in part to restore his spirits, along with the help of his new friend and confidante Lady Campbell (Graves i. 361–6). He once again began to think of marriage, but proceeded with his usual lack of forcefulness. He gave Maria Edgeworth the impression that he had proposed, and she assumed they were engaged; Wordsworth heard the rumour in early 1831, and Hamilton was forced to quash it (WW to WRH, 24 January 1831; WRH to WW, 2 February 1831) (De Selincourt and Hill ii. 365; Graves i. 425–8). Then in August 1831, Hamilton fell in love with Ellen de Vere (sister of Aubrey de Vere), and promptly wrote to Wordsworth about her. Wordsworth again proved an exemplary agony aunt; he saw through Hamilton's immature swooning and advised him to close the deal:

To speak frankly you appear to be at least three fourths gone in love; therefore, think about the last quarter in the journey.

(WW to WRH, 27 October 1831; De Selincourt and Hill ii. 440)

Hamilton made the attempt at a proposal, assisted by friends, but was thwarted by a miscommunication, and, in typical style for him, gave up too quickly (Hankins, *Sir William Rowan Hamilton* 109–10; O'Donnell 88–90). He finally married the 'girl next door', Helen Bayly, in April 1833. This time Hamilton did not consult Wordsworth. Helen's replies to Hamilton's passionate letters are 'invariably subdued and unenthusiastic, as well as being strikingly unsophisticated and limited in tone' (O'Donnell 96). Helen proved to be a hypochondriac, and abandoned Hamilton and their children for long periods.³⁾

3) Hankins notes the connection between Hamilton's abstract thinking and his romantic engagements: 'The same love for the abstract and the ideal can be seen in his personal relationships, especially in his relationships with women. There is an aura of artificiality about all of his courtships. The emotions they produced were honest enough, but Hamilton always expressed his love in a

References to Hamilton's romantic misadventures—the last with lifelong tragic consequences—may appear symbolically in Wordsworth's late poetry, as discussed below. Wordsworth saw himself not only as Hamilton's poetic mentor (or gentle discourager), but as almost a parental figure.⁴⁾ As Graves notes, Wordsworth's letters to Hamilton exhibit a 'freedom of style' not common in the elderly poet, suggesting the closeness of their relationship.⁵⁾ In Wordsworth's poem *The Triad*, the familiarity of his parental role becomes almost uncomfortable, as the poem's narrator imagines how the young ladies of the Wordsworth circle might make a partner for an idealised young man that could very well symbolise Hamilton.

Coleridge, Kant, Wordsworth: Triads and Quaternions

Hamilton was a passionate reader of not only Wordsworth, but of Coleridge as well. He loved Coleridge's poems, particularly *Christabel*, and he also devoured Coleridge's philosophical prose with great care and attention. Hamilton did not meet Coleridge until March 1832; however, by the time he met Wordsworth he had absorbed Coleridge's metaphysics as presented in *The Friend*, *Aids to Reflection* (1825), and the *Biographia Literaria*.⁶⁾

theoretical way. Love existed for him in some unearthly realm apart from this world, and that is probably why his love for Catherine Disney remained so vivid throughout his life' (Hankins, *Sir William Rowan Hamilton* 99).

- 4) Hamilton genuinely considered devoting his life to poetry rather than science; he wrote to John Herschel in 1847 that 'it would really seem to have been at one time a toss-up, whether I should turn out a rhymers or an analyst' (Graves ii. 591).
- 5) 'With his friend Wordsworth his correspondence was carried on with animation and increase of mutual confidence and affection. Hamilton's letters contain characteristic passages on the subject, which moved him so much, of his own relations to poetry and science, and upon contemplation and action; and the letters of Wordsworth exhibit a pleasant freedom of style, approaching playfulness, which is not usual with him, and which may be taken as a proof of his special liking for his correspondent' (Graves i. 367–8).
- 6) 'I have... borrowed Coleridge's *Sketches of His Literary Life and Opinions*.... In these *Sketches*, which form a work called *Biographia Literaria*, Coleridge has many interesting criticisms on Wordsworth and on other poets, besides other valuable thoughts; and altogether I much enjoyed the perusal of them, although I have not yet a copy of my own' (Graves i. 366).

Partially through Coleridge, Hamilton discovered the work of Kant; Kant's critiques have a well-documented influence on Hamilton's metaphysical publication, *Algebra as the Science of Pure Time* (Hankins, *Sir William Rowan Hamilton* 247–75).

The concept of a triangular friendship between three minds—Wordsworth, Coleridge, and Hamilton—has a more than metaphorical significance. To Hamilton, geometry was a form of reality, not merely an idealisation of it. Hamilton, like Wordsworth, espoused the importance of the imagination; however, he privileged the link between imagination and what he termed Intellect: anti-materialist, abstract deduction, similar to what Coleridge termed the Reason. During Wordsworth's visit to Hamilton at the Dunsink Observatory in 1829, the two men discussed poetry and science; Graves summarises their conversation with the dichotomy, 'the poet speaking as the advocate of Imagination, and the man of science as the advocate of Intellect' (Graves i. 310). Each man apparently appreciated the other's position and agreed with it, but not to the degree that he surrendered his own. Hamilton's sister Eliza recorded a detailed portrait of their time together. Wordsworth read to Hamilton from Hamilton's copy of *The Excursion*, and Hamilton responded that

he thought the Intellectual faculties held equal rank *at least* with the Imaginative.... he told Wordsworth that he believed Mathematics to be a connecting link between men and *beings of a higher nature*; the circle and triangle he believed to have a *real existence in their minds and in the nature of things*, and not to be a mere creation or arbitrary symbol proceeding from human invention.

(Hankins, *Sir William Rowan Hamilton* i. 314; my emphasis)

Wordsworth's good-humoured response to this comment implied that Hamilton was a Platonist; however, Hamilton's statement is really anti-Platonic, in that he believes that Plato's ideal forms have a physical existence 'in the nature of things'.

Hamilton's algebraic research on complex numbers led to a passion—or

perhaps more accurately, an obsession—with ‘triplets’: groups of algebraic functions that reflect the three axes of Cartesian space, which in physics can describe our three-dimensional physical reality. This obsession eventually led to his discovery of quaternions—a four-dimensional algebra. But triadic thinking—thinking in threes—structured Hamilton’s approaches to both mathematics and philosophy. As a recent biographer writes,

the idea of trinity or triads was always of large importance to Hamilton.... This he would soon equate with that other triadic classification of past-present-future, in his interpretation of Algebra as the Science of Pure Time.... ten years after this first meeting with Coleridge, he developed his own triadic philosophy... based on his three fundamental classifications of Will, Mind and Life. Ternary rather than binary logic was generally more important in Hamilton’s scheme of things. (O’Donnell 93)

Coleridge’s triadic and trinitarian philosophy strongly influenced Hamilton’s; Hamilton developed his own triadic philosophy that drew on—and clarified or reinterpreted—Kant’s thinking in the ‘Transcendental Analytic’ and the ‘Analogies of Experience’ regarding the subjectivity or objectivity of time (past, present, and future) (Hankins, *Sir William Rowan Hamilton* 269, 272–3). Like Wordsworth, Hamilton was fundamentally interested in unity and transcendence: finding a general principle, often hidden, that simply and elegantly represented the complexities of nature. Hamilton sought to develop his algebra of triads as a representation of nature’s fundamental unity:

to discover the secret unity and constancy of nature amid its seeming diversity and mutability—to construct, at least in part, a history and a prophecy of the outward world adapted to the understanding of man—to account for past, and to predict future, phenomena... (Hamilton, *Introductory Lecture on Astronomy, Delivered in Trinity College, Dublin, 8 November 1832* 5)

Thus, Hamilton sought to use triadic mathematics and metaphysics to ‘see into the life of things’. He based his own ‘high argument’, like Wordsworth’s in the Prospectus to the *Excursion* (‘On man, on Nature, and on Human Life’), on triadic structures (Wordsworth, *Excursion* 39, l.1).

Hamilton’s knowledge of Wordsworth’s poetry

With this background in mind—Wordsworth as Hamilton’s mentor in poetry and romance, and Coleridge as his mentor in metaphysics—let us look at one example of Hamilton’s use of Wordsworth’s poetry in his astronomical lectures, and finally what I think is some evidence of Wordsworth’s friendship with Hamilton in a group of Wordsworth poems written after his first meeting with Hamilton in 1827. Romance, as much as triadic metaphysics, shapes these poems, much the same way that Hamilton’s hope and despair over his various catastrophic romances alternately inspired and impaired his mathematical creativity (O’Donnell 87, 90).

Hamilton possessed a comprehensive knowledge of Wordsworth’s published poetry. For example, when Hamilton’s first son was born on 10 May 1834, Hamilton wrote to Wordsworth:

My little boy, now about two months old, has not idled me much as yet, though I own that I sometimes repeat to him portions of the *Ode on Intimations of Immortality*, and fancy that he enjoys the sound. When his mother sings to him he is in rapture, but he really seems to enjoy my recitation too.... But I must not chatter too much about what can scarcely interest any but his parents.

(Hankins, *Sir William Rowan Hamilton* 120; Graves ii. 97)

No doubt Wordsworth would have welcomed any chatter about parents reciting his poetry to their infants!

Yet Wordsworth’s poetry exerted more substantial effects on Hamilton’s astronomical and mathematical thinking. In an Introductory Lecture on Astronomy in 1831, Hamilton describes Wordsworth as ‘that great poet,

that master-spirit of our age'. The course of twelve astronomy lectures was one of only a few obligations of Hamilton's post. The introductory lecture, 'of the widest possible generality', allowed Hamilton to indulge in poetry and metaphysics:

Hamilton allowed full rein to his soaring imagination combined with his undoubted erudition. History vied with metaphysics and classical references in his utterances, the whole delivered in an enraptured manner befitting the oratorical tradition of Edmund Burke. The annual Introductory Lecture was obviously regarded as good intellectual theatre, so that professors and Fellows sat on the benches along with undergraduates. Literary figures and even society ladies also joined in the audience. Hamilton, during these early years, was an orator whom people flocked to hear. (O'Donnell 79)

After praising Wordsworth, Hamilton goes on to quote from *The Excursion* as an illustration 'of the advantages to our moral being that may be derived from Science when studied in a proper spirit' (Graves i. 501). Hamilton read or recited a long passage, first published as part of Book 4 of *The Excursion*, as the basis for a discussion of the role of the imagination in the natural sciences.

These were likely the same lines that Wordsworth read to Hamilton in the drawing-room at Dunsink, after their wet walk together in August 1829—lines pertinent to their debate on the relative roles of science and the imagination in elevating the human spirit. Graves documents the remarkable length at which Hamilton quoted Wordsworth, in the middle of an astronomy lecture: 48 lines of blank verse. These lines express Wordsworth's position on the role of 'Science' or empirical reasoning:

Science then
Shall be a precious Visitant; and then,
And only then, be worthy of her name.

For then her Heart shall kindle; her dull Eye,
 Dull and inanimate, no more shall hang
 Chained to its object in brute slavery;
 But taught with patient interest to watch
 The processes of things, and serve the cause
 Of order and distinctness, not for this
 Shall it forget that its most noble use,
 Its most illustrious province, must be found
 In furnishing clear guidance, a support
 Not treacherous, to the Mind's *excursive* Power.
 —So build we up the Being that we are... (Excursion iv. 1224–71)

We can see from these lines how, from 1827, Wordsworth and Hamilton found kindred spirits in each other. Although the two men did not agree exactly on the relative importance of science (in these lines, meaning empiricism, or *a posteriori* knowledge and analysis, rather than Coleridgean 'Reason') and poetry, both sought a holistic understanding in their own sphere of expertise that did not exclude the other's.

Perhaps the most remarkable fact about these lines, first published in 1814, which served as a philosophical foundation for the Wordsworth-Hamilton relationship, is that they date to 1798, almost 30 years before the two men ever met. They are one of several blank-verse fragments that Wordsworth wrote during his and Coleridge's *annus mirabilis*, when Coleridge's philosophical thought began to shape Wordsworth's philosophical poetry. Stephen Gill remarks that

These passages of meditative verse cannot stand as independent poems, but are too important to be omitted... They are all entered in Dove Cottage MS 16 and belong to the period in 1798 when W was contemplating *The Recluse*, fired by conversations with Coleridge on philosophy, religion, and politics.... Each of these passages draws on W's knowledge of eighteenth-century thought... but what is important is that they are an attempt to convey philosophical positions though

the medium of the language of passion and imagination.... Passage (b) ['Not useless do I deem', quoted above from 'Science, then...'], later incorporated into *The Excursion*, Book iv, is a discarded conclusion to MS B of 'The Ruined Cottage'. The opening lines are quoted by C in a very important letter of c.10 March 1798. (Gill 676, 678–80)

Hamilton was an astute reader of poetry. He no doubt recognised the freshness of these lines, and their Coleridgean content, modified through Wordsworth's differences of opinion with Coleridge. To use the triadic metaphor, Hamilton saw the influence of Coleridge's thought in Wordsworth, as much as he recognised Kantian thought in Coleridge. And while he disagreed with Coleridge, who vehemently denied that 'the mind can be said to be formed by the Senses', he would have felt much more in agreement with Wordsworth's idea, expressed in the lines above, that the 'most noble use' of science, its

most illustrated province, must be found
In furnishing clear guidance, a support
Not treacherous, to the Mind's *excursive* Power.

Hamilton coupled his praise of empirical science with the belief in Kantian *a priori* knowledge and analysis, the innate reason and creativity that Wordsworth calls 'the Mind's *excursive* Power'.

One of Hamilton's greatest mathematical achievements was the discovery of number couplets, which could represent imaginary numbers in real terms. This discovery would not have been possible without his attempt to establish algebra as the science of 'pure time', in contrast to geometry as the science of space. Hamilton modified Kant's ideas about the *a priori* nature of time sense to develop his own ideas of past, present, and future. Thus, Wordsworth's poetry for Hamilton was no mere pastime, or embellishment for his introductory lecture in astronomy for lay members of his audience. On the contrary, Wordsworth's philosophical arguments helped shape his own, which in turn shaped his discoveries in algebra.

These lines of Wordsworth from 1798, first published in *The Excursion* (and quoted above, by Hamilton, in his 1831 lecture), had become, in 1814, a speech by the character of the Wanderer—the poem’s *virtuoso* philosopher, natural theologian, and metaphorical magician—as a corrective to the despondency of the Solitary. The lines form the philosophical core of *The Excursion*; it is notable that they reserve a place for empirical Science, defining its ‘most noble use’ as a support ‘to the Mind’s *excursive* Power’—that is, the operation of the innate Coleridgean Reason, and the Wordsworthian creative imagination. This cautious acceptance of abstract reasoning softens the stance taken by the speaker in the poem ‘The Tables Turned’, from the *Lyrical Ballads* (1798): ‘Our meddling intellect | Misshapes the beauteous forms of things | We murder to dissect’ (ll.26–8). Fourteen years before he met Hamilton, Wordsworth had completed his second great philosophical poem to engage with the problem of how the external world *should* be fitted to the mind; in other words, how inductive reasoning, and the evidence of sense-perceptions interact with *a priori* knowledge, and the imagination, to create the moral sense.

Coleridge, in his disappointed letter to Wordsworth in response to reading *The Excursion*, had called the privileging of sense-perceptions the ‘sandy sophisms of Locke and the Mechanic Dogmatists’.⁷⁾ Yet, familiar

7) STC to WW, 30 May 1815. In this letter, Coleridge lays out a summary for *The Recluse* as he expected it to be written by Wordsworth, based on their plans of 1798. Coleridge’s opposition to empiricism and the new sciences of the nineteenth century shows clearly; he hoped that Wordsworth would demonstrate ‘that the Senses were living growths and developments [*sic*] of the Mind & Spirit in a much juster as well as higher sense, than the mind can be said to be formed by the Senses—’. He hoped for a philosophical poem that argued for ‘a general revolution in the modes of developing & disciplining the human mind by the substitution of Life and Intelligence... for the philosophy of mechanism which in every thing that is most worthy of the human Intellect strikes *Death*, and cheats itself by mistaking clear Images for distinct conceptions, and which idly demands Conceptions where Intuitions alone are possible or adequate to the majesty of the Truth’ (Griggs iv. 574–5). While Wordsworth had been, and continued to be, an Idealist, he did not share Coleridge’s strident privileging of the abstraction of the senses, in 1815, any more than he had in 1798.

as he was with Wordsworth's unpublished blank verse of 1798, Coleridge should have expected to be disappointed. Wordsworth was always more accepting of an eventual place for empirical natural philosophy in his own philosophical system, in contrast to the polemic of 'The Tables Turned'. He only had to wait long enough for a modern scientist to come along who shared his passionate belief in science as a means to a spiritual end—and in Hamilton, he found such a scientist. The publication of the passage of 1798 excerpted, but essentially unchanged, in *The Excursion*, demonstrates the remarkable consistency of Wordsworth's position on this subject. And, in his exchanges with Hamilton in the 1820s and 1830s, Wordsworth acknowledges that his dyad of creative imagination and divinity might be allowed, under the right conditions, to incorporate the 'precious Visitant' of science, and become triadic.

Light and Sound: Hamilton inspires Wordsworth

I have introduced three contexts for Wordsworth's friendship with Hamilton: Wordsworth's use as a sounding-board for poetry and matters of the heart; Hamilton's obsessive triadic thinking, influenced by Coleridge and Kant's metaphysics; and the main dialectic of argument between Wordsworth and Hamilton regarding the relative importance of imagination and intellect.

In this triad of contexts, let us take a closer look at three late Wordsworth poems that, unlike *The Excursion*, do not incorporate unpublished lines from his earlier years. The first two—*The Triad* and *On the Power of Sound*—were composed around the time of his first meeting with Hamilton. The last, the sonnet 'Eagles', was composed two years after Wordsworth visited Ireland, and the only poem he wrote directly inspired by that journey.⁸⁾ *The Triad* was completed in March 1828, and *On the Power of Sound* between March

8) I admit that, after familiarising myself with Hamilton's mathematics and metaphysics, I began this lecture by taking a closer look at *The Triad* simply because of its title, and the fact that it was written shortly after Wordsworth met Hamilton. While the poem did not turn out to contain the hidden Wordsworthian allegory of Hamiltonian algebra that I had hoped, it led to what I think is quite a fascinating suggestion of the presence of Hamilton's friendship in Wordsworth's poetry.

and December 1828. The composition of both poems thus falls between Hamilton's first visit to Wordsworth in the Lakes, and Wordsworth's visit to Hamilton at the Dunsink observatory in Dublin. Both poems represent the 'higher strain'—the philosophical verse—of an intense period of inspiration and creativity around 1828. Wordsworth wrote to Frederic Mansel Reynolds, editor of the journal *The Keepsake*, on 19 December:

I am rather rich, having produced 730 verses during the last month—
after a long fallow—In the list are two stories—and three incidents.

(De Selincourt and Hill i. 675; Wordsworth, *Last Poems* 441)

I am not suggesting that this period of new writing occurred solely, or even primarily, due to Hamilton's influence. Nevertheless, *The Triad* and *On the Power of Sound* contain traces of ideas and images that reflect Wordsworth's reinvigorated thinking on subjects also dear to Hamilton.

The two poems are also connected in that they share an origin in manuscript lines from March 1828; these lines then developed into two different poems. The first page of manuscript begins with eight lines from the eventual middle of *The Triad*—lines about love; the text continues with ten lines that become the opening of *On the Power of Sound*:

There is a universe of Spirit
Which all who truly live inherit

There is a
~~A wondrous~~ world together bound
By sight dependent upon sound
A world where passion is the tie
Though mans degraded ear & eye
Do ill perceive that mystery.

rapture
By ~~passion~~ moved the vernal throng
Of warblers in full concert strong... (Wordsworth, *Last Poems* 681)

These lines establish the philosophical foundation of *On the Power of Sound*; the poem celebrates not only sound, but sound in conjunction with light, and privileged over it. The declaration that ‘passion is the tie’—the link between sense-perception and the immaterial ‘universe of Spirit’—shows Wordsworth reasserting his confidence in the priority of the poetic imagination. We know this because the image of a ‘wondrous world’ bound together by ‘sight dependent upon sound’ goes all the way back to the two-part *Prelude*:

I felt the sentiment of Being spread
 O’er all that moves, and all that seemeth still,
 O’er all that, lost beyond the reach of thought
 And human knowledge, *to the human eye*
Invisible, yet liveth to the heart...

...in all things

I saw one life, and felt that it was joy.
 One song they sang, and it was *audible*,
Most audible then when the fleshly ear,
 O’ercome by grosser prelude of that strain,
 Forgot its functions, and slept undisturb’d.

(Wordsworth, 1799 *Prelude* ii. 420–24, 429–34; my emphasis)

‘Heard melodies are sweet, but those unheard | Are sweeter’? Just as Hamilton believed in the physical reality of geometric forms, so Wordsworth had been writing about the reality of a Platonic universal music for almost three decades when he met the young mathematician.

Yet the presence of Hamilton in *The Triad*, the first of the two poems completed, has less to do with the friends’ debate on imagination and intellect, and more to do with love. *The Triad* is an allegory that associates the classical Charites or Graces with three young women, dear to Wordsworth’s heart. As he dictates in the Fenwick note to the poem:

Rydal Mount. 1828. The girls Edith May Southey, my daughter Dora and Sara Coleridge. (Curtis 16. See also 115)

The poem's title has only a superficial connection to Hamilton's triadic thinking; the title refers to people, not algebraic functions or philosophical principles. Wordsworth did, however, intend the word to convey the idea of unity through trinity; he wrote to George Huntley Gordon on 15 December 1828:

How strange that any one should be puzzled with the name, Triad, after reading the Poem. I have turned to Dr. Johnson, and there find, 'Triad, three united;' and not one word more, as nothing more was needed.... (De Selincourt and Hill i. 689)⁹⁾

While the religious and poetic concept of the three Graces predates algebra, it probably does not predate geometry—either the work of Euclid (*ca.* 300 BCE), or the legendary achievements of Pythagoras (*ca.* 570–495 BCE).

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- 9) Wordsworth may have had the Christian trinity in mind as well as the classical Graces; while the published text does not include overt Christian references, unused draft material perhaps intended for the poem, or for *On the Power of Sound*, makes the religious allegory clear:

Advance like that harmonious Sisterhood
Or in fix'd prayers, mid this grove, unite
Like those three Angel Visitants that stood,
Furling their wings before their patriarch-host,
In beauty not unwilling to be lost
For sweet recovery, in each other's sight.

(DC MS. 89 (94r). Wordsworth, *Last Poems* 438)

This dual classical and Christian allegorical vision is a trope of early modern and Victorian poetry; Hamilton, however, used the same sorts of allegories when writing about metaphysical and mathematical systems. A symbol that serves only as poetic allegory in *The Triad* would have a much greater significance for Hamilton as he developed his metaphysics. He had already read Coleridge's *Aids to Reflection* (1825), and took Coleridge's insistence on a triadic universe—probably derived from Kant—quite seriously.

The mingled origin of *The Triad* with *On the Power of Sound* suggests that Wordsworth knew the classical association, described in the travels of Pausanias, between the graces and the Eleusinian mysteries.¹⁰⁾

Both poems include the theme of occult knowledge and initiation into mysteries. Two pages in DC MS. 89, containing material for both poems, include draft lines that would become part of the twelfth section of *On the Power of Sound*. But these lines initially became the opening of that poem, rather than its philosophical conclusion as in the published text. The Cornell Wordsworth prints the first fair copy of the poem, found in DC MS. 131, which begins:

There is a world of Spirit,
By tones and numbers guided and controll'd,
And glorious privilege have they who merit
Initiation in that mystery old.
The Heavens, whose aspect makes our minds as still
As they themselves appear to be
Innumerable voices fill
With everlasting harmony. (Text of MS. 131, ll.1–16; *Last Poems* 113)

The 'world of Spirit' that is 'guided and controll'd' by 'tones and numbers' seems, at face value, to be the world of instrumental music. In this case the 'Initiation' is merely metaphorical; the text praises as fortunate anyone with formal skill in music. But from the fifth line it becomes clear that the music implied in the first four lines is not merely the product of human culture, but a more universal music. Through an astronomical image of the rotating celestial sphere, the sounds of Ocean and Air—the music of nature—fill the heavens with 'Innumerable voices' and support the cycle of seasons. This is, therefore, not quite the early modern music of the spheres, nor is it

10) Pausanias writes: 'at Athens, in front of the entrance to the Acropolis, there are also three Graces; and beside them mysteries are celebrated which are kept secret from the multitude' (Pausanias ix. xxxv, 488).

merely 'scientific' sound in and of itself—the waveforms of vibration in air or another material. It is something in between, and I read in it some new appreciation of the mathematical nature of nature. These are the 'tones and numbers' that Wordsworth now acknowledges in the functions of nature, 'yea in the wave itself, | And mighty depth of waters' (Wordsworth, 1799 *Prelude* ii. 427–8). Hamilton's revolutionary work on dynamics, which developed Newton's mechanics into equations that suggested the possibility of a relation between waves and particles based on their momenta (the Hamiltonian function) would not be published until 1834 (Hamilton, "On the Application to Dynamics of a General Mathematical Method Previously Applied to Optics"). Nevertheless, Wordsworth's lines seem to suggest a formal relation between the wave forms of music and the movements of celestial bodies, which the Hamiltonian function accomplished in its conception of phase space (Penrose 226–30).

In this interpretation, the 'Initiation in that mystery old' in line four refers not only to skill in the mathematics of musical harmony, but mathematics in general. The connection between the Graces and the Eleusinian mysteries has, through the imagery of music and the lyre, associations with more mathematical cults. The mystical cult of Pythagoras used numbers and geometry as important components of their rites; Pythagoras is credited not only with the discovery of the Pythagorean theorem for right triangles—one of the underpinnings of Euclid and all modern geometry—but also with the *tetractys*, a triangular figure with elegant mathematical properties and religious significance.¹¹ Therefore, although *The Triad* contains no overtly triadic mathematics, the manuscript origins of the poem along with *The Power of Sound* seem to show Wordsworth inspired by classical triadic imagery, associated with music and occult mathematical knowledge, from late 1827.

However, I think the sudden arrival of brilliant, enthusiastic, and

11) In 1846, Hamilton wrote a poem titled 'The Tetractys', in which Pythagoras's figure becomes a symbol for explaining Hamilton's quaternions (Hankins, "WRH on the Metaphysics of Mathematics" 176).

lovelorn young Hamilton in Wordsworth's life exerts quite another, more obvious influence on the poem. The poem is primarily a Wordsworthian effusion of love for his daughter and her two friends. The initial idea for the poem predates Wordsworth's first meeting with Hamilton; as Wordsworth writes:

I think it contains some of the happiest verses I ever wrote. It had been promised several years to two of the Party—before *a fancy fit for the performance struck me*—it was then thrown off rapidly—and afterwards revised with care. (De Selincourt and Hill i. 689; my emphasis)

The careful revision indicates Wordsworth's opinion of the poem; similarly, he wrote to Barron Field a few days later:

I am truly glad you liked the Triad—I think [?]a great part of it is as elegant and spirited as any thing I have written...
(De Selincourt and Hill i. 695)

The strangeness of the poem lies in its allegory, which suggests Wordsworth's view of himself as an elder poet inspired by, and inspiring, a young poet-mathematician. Was the 'fancy fit for the performance' the effect of meeting Hamilton? The theme of the poem is love, but not the sisterly love of the three Graces for each other; rather, their fitness as wives, or in the poem's classical language, 'consorts'.

The original title for the poem is 'The Promise': not a promise made to one of the three young women, but a promise made to a young *man* to find him a suitable partner. It is, unquestionably, a poem of the male gaze—a double male gaze. Despite its happy tone, the narrative creates an uncomfortable feeling because the speaker relishes his role as a matchmaker to the three young Graces, the youngest of them his daughter. This narrative of matchmaking structures the whole poem. The first stanza reads:

Show me the *noblest Youth of present time,*

Whose trembling fancy would to love give birth;
 Some God or Hero, from the Olympian clime
 Returned, to seek a Consort upon earth;
 Or, in no doubtful prospect, let me see
The brightest star of ages yet to be,
 And I will mate and match him blissfully.

(*Last Poems* 105, ll.1–7; my emphasis)

Of the three young women praised in the poem, the eldest, Sara Coleridge (1802–1852), would marry her cousin Henry Nelson Coleridge (1798–1843) in 1829.¹² While Henry was already a barrister, an accomplished writer, and a fellow of King's College, Cambridge, I doubt that the line 'The brightest star of ages yet to be', refers to him. It may not refer to any specific young man. If it does, however, bear any stamp of reality, then I think William Rowan Hamilton makes a good candidate, both through the astronomical metaphor of 'The brightest star of ages yet to be', and the phrase, 'Whose trembling fancy would to love give birth'. I am not suggesting that Wordsworth was fantasizing about a match between Hamilton and one of the three young women, especially since the eldest was already betrothed. But Wordsworth's early letters to Hamilton give advice on matters of the heart along with poetic criticism; even from their first meeting, Hamilton's 'trembling fancy' would have been clear to Wordsworth.¹³ In late 1827, he may have been thinking about what sort of woman would make a suitable partner for his

12) Sara Coleridge (STC's daughter) to Rev. Henry Moore, 4 August 1847: the poem 'is, to my mind, *artificial* and *unreal*. There is no truth in it as a whole, although bits of truth, glazed and magnified, are embodied in it. . . . The poem always strikes me as a mongrel—an amphibious thing, neither portrait nor ideal, but an ambiguous cross between the two' (Coleridge ii. 126, 410; Wordsworth, *Last Poems* 439).

13) Although he did not mention Catherine Disney by name (except to Lady Campbell), Hamilton made no secret of his unrequited love for her after her engagement in 1825: 'Hamilton himself seemed to wish to make this lost love of his life public knowledge since he published his poem about it in the *Dublin Literary Gazette* and *National Magazine* in 1830 and showed it to anyone he thought likely to be sympathetic' (Lewis).

new friend, the lovelorn prodigy.

Each of the three Graces in the poem is unusual; the sections that introduce them contain a plethora of astronomical imagery: 'starry train', 'ether', 'frosty star', 'crescent moon'. The introduction of the first, 'Lucida', also depends on a pair of classical bird images. The bard-enchanter summons Lucida 'to regions solitary, | Where the eagle builds her aery', regions more beautiful than any that ever

Tempted the bird of Juno to unfold
His richest splendor, when his veering gait
And every motion of his *starry train*
Seem governed by a strain
Of music, audible to him alone. (*The Triad* ll.47–51; my emphasis)

The enchanter summons a Grace of Light using an image of a female eagle, contrasted with the 'bird of Juno': a peacock, implicitly male, with the symbolic 'starry train' of his tail—moving, like the celestial sphere, 'governed by a strain | Of music, audible to him alone'. The poet-enchanter summons a female personification of light, as the first prospective 'Consort' of 'The brightest star of ages yet to be'; he does so using language that contrasts the mythic symbols of that paragon of a difficult marriage: Jove and Juno.

Wordsworth's Eagles of 1828–31

This image of the bird of Jove leads me to the last idea I want to explore, which is that an image common to all three of these poems—*The Triad*, *On the Power of Sound*, and 'Eagles'—has some symbolic association with Hamilton in Wordsworth texts from 1828. *The Triad* does not equate its image of the eagle with Hamilton, but the next two poems demonstrate that eagles in all three poems touch on a set of related ideas: light and optics; scientific endeavour; Hamilton's quest for love; and finally, his great precursor—and victim of that famous toast at the Immortal Dinner—Isaac Newton.

Wordsworth composed the sonnet 'Eagles' between 4 and 7 October,

1831; it was directly inspired by his most recent Scottish tour, that would provide many of the poems for the volume *Yarrow Revisited* (1835). He saw the imprisoned eagle described in the sonnet at Dunollie Castle in the Bay of Oban. However, only the first four lines describe this Scottish eagle; the imprisoned eagle gives rise to the memory of seeing a pair of eagles at the 'Promontory of Fair-head on the coast of Antrim' in Ireland (De Selincourt and Hill ii. 440–1). This sonnet from one of Wordsworth's Scottish tours thus includes the only lines written about his 1829 Irish tour, during which he visited Hamilton at the Dunsink observatory. Wordsworth sent the sonnet in a letter to Hamilton dated 27 October 1831—the same letter in which he tells the younger man that he seems 'at least three fourths gone in love' with Ellen de Vere, and to get on with 'the last quarter of the journey'. Through this letter, the eagle imagery already associated in Wordsworth's mind with Ireland, and therefore with Hamilton, now becomes juxtaposed against the young man's romantic difficulties.

But the effect of the memory of the pair of eagles at Antrim does not end there. This image of the eagle seems to have had a particular resonance for Wordsworth. A new stanza appears in a revised version of *On the Power of Sound*.¹⁴ In this version, published in *Yarrow Revisited* as *Stanzas on the Power of Sound*, the lines above, which formed the first stanza of MS. 131, now become the poem's twelfth stanza. The 'Argument' of the poem, published above the text, now confirms that the line 'Initiation in that mystery old' refers specifically to the Pythagorean mysteries, and connects their triadic mathematics with the occult mysteries of the three Graces in *The Triad*:

(Stanza 12th.) The Pythagorean theory of numbers and music, with their supposed power over the motions of the universe—imagination consonant with such a theory. (Wordsworth, *Last Poems* 116, ll.9–11)

14) The first draft of this poem was composed between March and December 1828. The version of the poem as published in *Yarrow Revisited* grew out of revisions between November 1829—after the tour of Ireland in August—and 24 July 1834, when the 1835 text was sent to the printer (De Selincourt and Hill ii. 724–5; *SSIP* 112).

The published text then follows this stanza with a new thirteenth stanza that reads:

Break forth into thanksgiving,
 Ye banded Instruments of wind and chords;
 Unite, to magnify the Ever-living,
 Your inarticulate notes with the voice of words!¹⁵⁾
 Nor hushed be service from the lowing mead,
 Nor mute the forest hum of noon;
Thou too be heard, lone Eagle! freed
 From snowy peak and cloud, attune
 Thy hungry barkings to the hymn
 Of joy, that from her utmost walls
 The six-days' Work, by flaming Seraphim,
 Transmits to Heaven!

(*On the Power of Sound*, xiii. 193–204; my emphasis)

In these lines, the 'inarticulate' music of nature unites with articulate human voices to 'magnify the Ever-living'—a striking new phrase for the 'one life'. The speaker commands a solitary eagle to join this harmony, to 'attune' its barkings to the 'hymn | Of joy' which the seraphim transmit between earth and heaven. The text suggests two 'attuned' links between earth and what Hamilton termed 'beings of a higher nature': Ganymede and 'flaming Seraphim'; eagle-eyed intellect, and creative imagination.

But why the eagle? Images of eagles exist throughout Wordsworth's oeuvre; why should we assume some symbolic connection between the image of the eagle and Wordsworth's friendship with Hamilton, simply

15) Compare *Excursion* Book 4, lines just above the long passage discussed by Wordsworth and Hamilton at Dunsink, and quoted by Hamilton in his 1831 introductory lecture: 'Where living Things, and Things inanimate, | Do speak, at Heaven's command, to eye and ear, | And speak to social Reason's inner sense, | With *inarticulate language*' (Wordsworth, *Excursion* iv. 1198–1201; my emphasis).

based on the proximity between Wordsworth's first two meetings with Hamilton, and the composition of these three poems? Furthermore, if we accept the argument that, for Wordsworth, the eagle became the image that Wordsworth associated with Hamilton and his genius for optics and mathematics, we run into a problem of chronology. *The Triad* contains eagle imagery and astronomical imagery (and the eagle in *The Triad* is associated, through *Lucida*, with light and optics). And *The Triad* was composed just after the two men met for the first time. But it was composed *before* Wordsworth made his Irish tour in August 1829, and saw the pair of eagles at Antrim, an image that became the subject of his only poem from that tour. So surely it must be a coincidence that *The Triad* contains the image of an eagle, associated with a Grace of Light? And therefore, if any symbolic connection exists between eagles and Hamilton in Wordsworth's texts, must it not exist only in 'Eagles' and the revised *Stanzas On the Power of Sound*—further suggesting that Hamilton is *not* the heroic young man in search of a consort in *The Triad*?

The coincidence vanishes when we consider the possibility that the image of the eagle in these three poems does not originate with Wordsworth, but with Hamilton. Here we see the beauty of a friendship in which each person's secondary passion is the other's profession. No doubt the pair of eagles on the coast of Antrim made a powerful impression on Wordsworth; but his experience of seeing them may have been reinforced by their *existing* symbolic association with Hamilton, and the two men's recent debate at Dunsink on the dialectic of imagination and intellect.

Wordsworth was not inspired by Hamilton's poetry, but he appreciated the effort that went into it; and above all, he read it meticulously. All we need to do to find the Hamiltonian root of the eagle images in *The Triad*, *On the Power of Sound*, and 'Eagles', is to return to the very first verses that Hamilton sent to Wordsworth, which survive in a letter sent to his sister Eliza on 16 September 1827, the day after his extraordinary evening with Wordsworth. The verses were composed at Ambleside and, typically for Hamilton, take as their subject his unrequited love for Catherine Disney. Wordsworth responded to these verses in his first letter to Hamilton, dated

24 September 1827, with a generous statement of appreciation, followed by perceptive criticism.

If we step back from Wordsworth's close-reading of problematic lines in Hamilton's poem, and read the whole thing, we find that it contains the following stanzas:

v.

And THOU too, mighty Spirit! whom to name
 Seems all too daring for this lowly line;
 Thou who didst climb the pinnacle of Fame,
 And left'st a memory almost divine!
 To whom the heavens unbarred their inner shrine,
 And drew aside their sanctuary's veil,
 While Nature's self disclosed her grand design,
 And smiled to see thee kindle at the tale,
 And before Science's sun thine eagle eye not quail:

vi.

All reverently though I deem of thee,
 Though *scarce of earth* the homage that I pay,
 Forgive, if 'mid this fond idolatry
 A voice of human sympathy find way;
 And whisper that while Truth's and Science's ray
 With such serene effulgence o'er thee shone,
 There yet were moments when thy mortal day
 Was dark with clouds by secret sorrow thrown,
 Some lingering dream of youth—some lost beloved one.

vii.

If then thy history I read aright,
 O be my great Example! *and though above,*
Immeasurably above, my feeble flight,
The steep ascent up which thy pinions strove,

Yet in their track my strength let me too prove;
 And if I cannot, quite, past thoughts undo,
 Yet let no memory of unhappy love
 Have power my fixèd purpose to o'erthrow,
 Or Duty's onward course e'er tempt me to forego!

(Graves i. 265; my emphasis)

The entire poem is ten stanzas. But before his critique of particular lines, Wordsworth writes:

The sixth and seventh stanzas affected me much, even to the dimming
 of my eye and faltering of my voice while I was reading them aloud.

(De Selincourt and Hill i. 545)

Wordsworth's taste is impeccable as it was three decades earlier; there is no question that these are the two best stanzas in the poem. In stanzas five to seven, Hamilton makes an apostrophe to a 'mighty Spirit' using the metaphor of this spirit, and himself as eagles. The 'mighty Spirit' in these stanzas, with an 'eagle eye', soaring 'Immeasurably above' Hamilton's 'feeble flight' is, of course, Isaac Newton.

Now the wheel comes full circle, and we realise two things. Firstly, inspired by his first visit to the Lake District and his ascent of Helvellyn the week before he meets Wordsworth, Hamilton casts himself as the eagle, striving to soar with Newton, along the 'steep ascent up which thy pinions strove'. Secondly, perhaps like many young people of genius, Hamilton projects his own biography and personality onto his image of his precursor and idol. The title of his poem is 'It Haunts Me Yet', and the first line indicates that what haunts him is his 'dream of early Love'. But thoughts of lost love give way to mathematical ambitions; Hamilton imagines that Newton, too, experienced 'secret sorrow', caused by 'Some lingering dream of youth—some lost beloved one'.

We see now how we can easily read *The Triad* as a poem about Hamilton, despite its only passing mathematical and astronomical imagery;

Wordsworth understands that, more than mathematical glory, the thing that this triad-obsessed young man—‘The brightest star of ages yet to be’—desires, what this brilliant young man desires, is love. Furthermore, we can see how in the sonnet ‘Eagles’, and *Stanzas On the Power of Sound*, the tension or dialectic between the imagination and the intellect as the link to Wordsworth’s ‘Ever-living’—the ‘one life’ of joy—and Hamilton’s ‘beings of a higher nature’, finds a role for Hamilton through the symbolism of the bird of Jove. The Hamiltonian eagle is not a symbol of Promethean punishment, but of soaring achievement.

Conclusion

Hamilton celebrates the Wordsworthian imagination along with the Coleridgean Reason—to the point that he quotes 48 lines from *The Excursion* during his introductory lecture on astronomy in 1832, and develops a detailed metaphysical system around Coleridge and Kant’s metaphysics. Through his friendship with Hamilton, Wordsworth finds not only a metempsychosis of his friendship with Coleridge, but also the inspiration to acknowledge that his ever-audible, never-failing principle of joy, derived from nature, gives access to ‘a world of Spirit | By tones and numbers guided and controll’d’. This slight accession to Hamilton’s privileging of mathematics demonstrates what Coleridge wanted from a Wordsworthian philosophical epic, but did not think *The Excursion* delivered: ‘true Idealism necessarily perfecting itself in Realism, & Realism refining itself into Idealism’ (Griggs iv. 575).

Young Hamilton is, to Wordsworth, everything that Newton was not: a mathematician who could feel the beauty of nature and its representation in philosophical verse. In the sonnet ‘Eagles’, Hamilton and his yet-unknown true love, his Consort, soar into the Irish sunset. And as the sonnet ‘Eagles’ springs from recollection into verse, two years after Ireland, Wordsworth sees what Newton, the epitome of the prisoner of deadening and dissecting abstraction, once was:

Such was this Prisoner once; and, when his plumes

The sea-blast ruffles as the storm comes on,
In spirit, for a moment, he resumes
His rank 'mong freeborn creatures that live free,
His power, his beauty, and his majesty.

(Wordsworth, *Sonnet Series and Itinerary Poems* 500, ll.12-14)

And so, through a late and lasting friendship, the rainbow is woven once more.

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Abstract

Among the many new friendships that Wordsworth cultivated in his middle age, one of the most remarkable was with the mathematician, astronomer, and poet William Rowan Hamilton (1805–1865). Recent scholarship has investigated the Wordsworth-Hamilton relationship in terms of how Hamilton's friendship regenerated Wordsworth's interest in mathematics, as evidenced by revisions to *The Prelude* (Owens). This paper supplies further evidence of how these two friends influenced each other's work, by demonstrating the influence of Hamilton on several of Wordsworth's new poems written after 1827. Hamilton's biographer Robert Perceval Graves documents Hamilton's use of Wordsworth's philosophical poetry in his lectures on astronomy. Similarly, evidence from correspondence supports the contention that Hamilton's metaphysics—so strongly influenced by Coleridge—influenced Wordsworth's conception of the imagination in his later years. Yet not only Hamilton's scientific achievements, but the young man's own voluminous, amateur verses, lingering in Wordsworth's mind as he composed new poems after 1827. The linked origins in manuscript of the poems *The Triad* and *The Power of Sound* show Wordsworth inspired by classical triadic imagery, associated with music and occult mathematical knowledge, from late 1827. The allegory of *The Triad* suggests Wordsworth's view of himself as an elder poet inspired by, and inspiring, a young poet-mathematician. *On the Power of Sound* demonstrates the incorporation of Hamiltonian dynamics into the classical symbol of the music of the spheres; Wordsworth's lines suggest a formal relation between the wave forms of music and the movements of celestial bodies, which the Hamiltonian function accomplished in its conception of phase space (Penrose 226–30). Finally, in Wordsworth's sonnet 'Eagles', an image common to all three poems—*The Triad*, *On the Power of Sound*, and 'Eagles'—gains symbolic association with Hamilton. The image of the eagle in these three poems may not originate with Wordsworth, but in Hamilton's poem 'It Haunts Me Yet'—the first poem he sent to Wordsworth for critical appraisal. In the reciprocal influences between three poems

by Wordsworth and one by Hamilton, the beauty of a friendship of two *virtuosi*, in which each person's secondary passion is the other's profession, becomes apparent. Through his friendship with Hamilton, Wordsworth finds not only a metempsychosis of his friendship with Coleridge, but also the inspiration to acknowledge that his ever-audible, never-failing principle of joy, derived from nature, gives access to 'a world of Spirit | By tones and numbers guided and controll'd'. This representation of a dialectic of imagination and empirical reasoning shows Wordsworth accomplishing something of what Coleridge wanted from a Wordsworthian philosophical epic, but did not think *The Excursion* delivered: 'true Idealism necessarily perfecting itself in Realism, & Realism refining itself into Idealism' (Griggs iv. 575).